

Proposal # <b>2001-J-202</b> (Office Use Only)
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**PSP Cover Sheet** (Attach to the front of each proposal)

Proposal Title: Propagation/Establishment Techniques & Habitat Requirements for Special Status Plant Species  
 Applicant Name: Bitterroot Restoration, Inc.  
 Contact Name: John DiGregoria  
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**Amount of funding requested:** \$150,737.00

**Some** entities charge different **costs** dependent on the source of the funds. If **it** is different for state or federal funds list below.

State cost \_\_\_\_\_

Federal cost \_\_\_\_\_

**Cost share partners?**

\_\_\_\_ Yes    ☒ No

Identify partners and amount contributed by each \_\_\_\_\_

**Indicate the Topic for which you are applying (check only one box).**

- |  |  |
|--|--|
| <input type="checkbox"/> Natural Flow Regimes                | <input type="checkbox"/> Beyond the Riparian Corridor                          |
| <input type="checkbox"/> Nonnative Invasive Species          | <input type="checkbox"/> Local Watershed Stewardship                           |
| <input type="checkbox"/> Channel Dynamics/Sediment Transport | <input type="checkbox"/> Environmental Education                               |
| <input type="checkbox"/> Flood Management                    | <input checked="" type="checkbox"/> Special Status Species Surveys and Studies |
| <input type="checkbox"/> Shallow Water Tidal/ Marsh Habitat  | <input type="checkbox"/> Fishery Monitoring, Assessment and Research           |
| <input type="checkbox"/> Contaminants                        | <input type="checkbox"/> Fish Screens  |

What county or counties is the project located in? Central Costa, Sacramento, San Joaquin, Solano, Yolo

**What CALFED ecozone is the project located in? See attached list and indicate number. Be as specific as possible** 1.4 Central and West Delta

**Indicate the type of applicant (check only one box):**

- |  |   |
|--|---|
| <input type="checkbox"/> State agency                    | <input type="checkbox"/> Federal agency           |
| <input type="checkbox"/> Public/Non-profit joint venture | <input type="checkbox"/> Non-profit               |
| <input type="checkbox"/> Local government/district       | <input type="checkbox"/> Tribes                   |
| <input type="checkbox"/> University                      | <input checked="" type="checkbox"/> Private party |
| <input type="checkbox"/> Other: _____                    |   |

Indicate the primary species which the proposal addresses (check **all that** apply):

- |   |  |
|---|--|
| <input type="checkbox"/> San Joaquin and East-side Delta tributaries fall-run chinook salmon  | <input type="checkbox"/> Spring-run chinook salmon |
| <input type="checkbox"/> Winter-run chinook salmon  | <input type="checkbox"/> Fall-run chinook salmon   |
| <input type="checkbox"/> Late-fall run chinook salmon   | <input type="checkbox"/> Longfin smelt             |
| <input type="checkbox"/> Delta smelt  | <input type="checkbox"/> Steelhead trout           |
| <input type="checkbox"/> Splittail  | <input type="checkbox"/> Striped bass              |
| <input type="checkbox"/> Green sturgeon   | <input type="checkbox"/> All chinook species       |
| <input type="checkbox"/> White Sturgeon   | <input type="checkbox"/> All anadromous salmonids  |
| <input type="checkbox"/> Waterfowl and Shorebirds   | <input type="checkbox"/> American shad             |
| <input type="checkbox"/> Migratory birds  |  |
| <input checked="" type="checkbox"/> Other listed T/E species: <i>Mason's lilaeopsis, Delta tule pea, Suisun marsh aster, Delta mudwort, Rose mallow</i> |  |

Indicate the type of project (check **only one box**):

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Research/Monitoring | <input type="checkbox"/> Watershed Planning |
| <input type="checkbox"/> Pilot/Demo Project             | <input type="checkbox"/> Education          |
| <input type="checkbox"/> Full-scale Implementation      |   |

Is this a next-phase of an ongoing project? Yes \_\_\_\_\_ No ☒

Have you received funding from CALFED before? Yes \_\_\_\_\_ No ☒

If yes, list project title and CALFED number \_\_\_\_\_

Have you received funding from CVPIA before? Yes \_\_\_\_\_ No ☒

If yes, list CVPIA program providing funding, project title and CVPIA number (if applicable):  
\_\_\_\_\_

By signing below, **the** applicant declares the following:

- The truthfulness of all representations in their proposal;
- The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization); and
- The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section 2.4) and waives any and **all** rights to privacy and Confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

John DiGregoria

Printed name of applicant

John DiGregoria

Signature of applicant

## EXECUTIVE SUMMARY

### Propagation/Establishment Techniques and Habitat Requirements for Special Status Plant Species

Submitted by: John DiGregoria, Bitterroot Restoration, Inc., Lincoln, California 95648. (916) 434-9695, fax: 434-9671, brical@pacbell.net. Participants/Collaborators: California Department of Fish and Game, US Fish and Wildlife Service. Total Cost: \$150,737.00

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Native species recovery and conservation has been identified as one among several funding priorities in the 2001 Proposal Solicitation Package. This proposal studies a total of five species that occur in the tidal freshwater emergent habitat type. Four of the five species, including Mason's lilaeopsis, Delta tule pea, Suisun marsh aster and Delta mudwort, are considered priority species for recovery by CALFED.

The ability to successfully propagate Delta plant species and recreate the habitat required by these at-risk species would make it possible to successfully restore large areas of sensitive ecological communities in the Delta. In addition, more than 1100 miles of levees could potentially be re-vegetated at the critical land/water interface where most habitat loss has occurred. Bitterroot Restoration, Inc. (BRI) proposes to develop the fundamental knowledge and technology required to assist successful habitat restoration for Delta at-risk species.

The objectives of *this* proposal are: 1) to develop an understanding of the seed physiology and germination requirements for each target species, 2) *to* develop efficient methods for propagating each target species, 3) to develop efficient methods for establishing plants in the field, and 4) to conduct research regarding community structure and function of the required habitat for each target species.

This proposal entails multiple tasks including: 1) the development of propagation protocol conducted under laboratory and greenhouse conditions, 2) the development of community structure and habitat requirements conducted on existing populations for species targeted by this proposal, 3) the development of propagule establishment conducted in a field pilot project.

Three products for delivery include:

- A plant propagation manual describing and illustrating seed germination, nutrient, and other growing requirements for each species,
- A specification handbook for designers, engineers, and contractors that includes details about plant handling, site preparation, installation (including timing), management of hydrology, and maintenance of plantings), and
- A detailed report describing the community composition and structure for each target species.

If funded, this proposal will occur over three years with most of the work being conducted in the first two years and monitoring occurring in year three. By following state and federal protocol, this proposal should have minimal environmental impact and should result in efficient tools that can improve future restoration projects in the Bay-Delta region.

## Project Description

### Statement of the Problem

A primary goal of the Ecosystem Recovery Program aims to recover at-risk species in the BAY-Delta System and to “minimize the need for future endangered species listings . . . Ecosystem restoration seeks to improve and increase the natural habitats” (CALFED 1999) for at-risk species. Currently limited information exists concerning the most effective methods for propagating and establishing in the field special-status plant species (SSPS) within the Bay-Delta System. Also missing is comprehensive information defining the habitat requirements for at-risk species. This proposal attempts to develop the most effective methods for propagating and establishing a select group of at-risk species into four different habitat types and to study the habitat requirements for each target species.

### Conceptual model

The range and populations of SSPS have declined significantly due to land use activities that have eliminated or modified required habitat. This has resulted in numerous plant species being listed for protection by the Federal Government, California State, and the California Native Plant Society. The long-term **goals** for a listed species are to recover the number of viable populations to a level where the species is no longer threatened (ESA, 1973).

Revegetation projects associated with habitat restoration often lack plant species diversity. This lack of plant species diversity (typically no forbs) limits the niches available for a diversity of insect, avian, and mammal species. Increasing plant species diversity should result in increased diversity of fauna. This increase in plant species diversity should include the reintroduction and expansion of populations of SSPS.

There is an uncertainty whether future levee and hydraulic projects in the Delta will negatively impact at-risk plant species that occur in the estuarine environment. By developing propagation and establishment techniques, SSPS can be successfully reintroduced into areas as **an** integral part of successful habitat restoration.

This research project targets selected SSPS and their associated habitat type, the tidal freshwater emergent (TFE) marsh. We will target five species that occur in TFE marshes; Delta tule pea (*Lathyrus jepsonii jepsonii*), Mason's lilaeopsis (*Lilaeopsis masonii*), Suisan marsh aster (*Aster lentus*), Delta mudwort (*Limosella subulata*), and Rose-mallow (*Hibiscus lasiocarpus*).

The objectives of this proposal are: 1) to develop an understanding of the seed physiology and germination requirements for each target species, 2) **to** develop efficient methods for propagating each target species, 3) to develop efficient methods for establishing plants in the field, and 4) to conduct research regarding community structure and function of the required habitat for each target species.

This proposal contains Phase 1, which includes a number of tasks to be conducted over a multi year study. Subsequent proposals contain phases 2, 3, and 4 and will be submitted sequentially in the future.

Phase 1 entails a set of tasks that study the habitat requirements of each target species and experiment with different propagation techniques followed by a pilot project where successfully propagated plants of all target species are established in the field. These establishment plots will be monitored for two years during Phase 1. Non-native invasive species will be controlled in the establishment plots throughout the duration of the project.

Phase 2 includes three parts. The first part continues monitoring of the establishment plots planted in phase 1. The second part develops the same information package as Phase 1 for new habitat types and a new set of species. This part follows the same steps and produces the same products as Phase 1. The third part attempts to restore a disturbed area to native habitat according to the knowledge developed from the literature search and habitat study conducted in phase 1.

Phase 3 includes the same three parts as Phase 2, but for new habitat types and the habitat types explored in Phase 2. Phase 4 reaches the point where SSPS are actually reintroduced into areas where habitat has been successfully restored.

### *Hypothesis being tested*

A specific method of propagation results in successful reproduction of SSPS.

A specific method of establishment results in successful reintroduction of SSPS.

The habitat requirements of SSPS populations should be understood and utilized when designing habitat restoration projects.

### *Adaptive Management*

When considering the long-term recovery of special status plant species within the geographical scope of the CALFED project area, the most effective techniques for plant propagation and establishment should be developed early on. In addition, an understanding of the community composition and structure and the specific habitat requirements of each species are necessary. This information allows future projects to recreate habitat and eventually reintroduce SSPS with an increased probability of success.

The information acquired in Phase 1 of this proposal would provide feedback to regulators, planners and property owners concerned with the recovery of SSPS. This information will allow interested parties to modify their short and long term plans for land use activities within a species range. The information acquired during later phases of this proposal would allow

interested parties the opportunity to recover SSPS to population levels sufficient to delist target species.

The community composition and structure study will provide information about the habitat requirements for each target species. This allows for future attempts to recreate habitat similar to the study communities. In time, the restored community should develop to the point where reintroduction of SSPS can occur.

Long term monitoring of the establishment plots will allow us to understand whether the techniques developed in this proposal are truly successful. If short-term results are positive and long-term results negative, it will allow us to adapt our restoration techniques to increase the likelihood of long term, sustainable success.

At the ecosystem level, having effective reintroduction techniques along with knowledge of the community composition and structure for each species provides a blueprint for designing future restoration projects that include SSPS. By reestablishing populations into their historical range and increasing the number of viable populations, we can move towards the goals of recovery and delisting at-risk plant species.

### Educational Objectives

This proposal provides for educational opportunities at all levels of society. The three products that result from this proposal will provide scientists, regulators and restoration advocates a methodology to reintroduce and successfully reestablish habitat, which includes viable populations of special status plant species.

The results from this proposal will be available for community environmental education programs. Schools, clubs, and local citizens can learn more about special status plant species, their population dynamics, reproduction and habitat requirements; and the significance of recovery. Participants of this proposal will be available to assist environmental educators with the development and/or implementation of such activities.

The audience for educational opportunities include: Federal and state agencies interested in the target species; local governments and community organizations; the private sector; university and community college students; and K-12 classes.

### **Proposed Scope of Work**

#### Location and/or Geographic boundaries of the Project

This project proposes to utilize state lands within the freshwater zone of the Delta region. The field portion of this research could include Contra Costa, San Joaquin, Sacramento, Solano and Yolo counties. All propagation experiments will occur at the Lincoln office in Placer County.

We propose using state lands at Fagan Marsh, Delta Meadows, Frank's Tract, Calhoun Cut and Delta Island for plant propagule collection and the habitat studies. We propose using Decker Island or Rhode Island for the establishment plots. Maps of the general area are attached.

We have been in consultation with state agency personnel concerning the locations and actions occurring on state lands. We are still in the process of determining the best locations for this study to meet both BRJ and state needs. We will have written permission for using state properties 30 days prior to approval as per page 52 in the 2001 PSP. Attached are copies of e-mail communication with state lands personnel including a letter stating we are in consultation for a taking permit.

### Approach

This project utilizes a series of tasks to complete the objectives outlined in this proposal. The project begins with the development of propagation protocol for each species. Following successful propagation, plants will be out-planted during the establishment pilot project. In conjunction with the propagation and establishment approaches, field studies will determine the habitat requirements of each target species.

#### *Task I. Propagation Protocol Development*

Task 1a: Literature Review. BRJ will identify existing research results at the species level regarding seed germination, propagation, and mycorrhizal associations for SSPS. The results of this search will be included as a chapter in the plant propagation manual.

Task 1b: Seed/Propagule Collection. Seed will be acquired from stable populations of each target species. For species that respond negatively to propagation by seed, plant vegetative parts will be used for the propagation experiments. Following state protocol, no more than five percent of available seed in a population will be harvested (CDFG, 2000). Any seed collection or harvest of plant parts will be conducted under mutually agreed upon guidelines following coordination with California Department of Fish and Game (CDFG) personnel. All appropriate state permits will be acquired prior to any seed collection or harvest. All sources of seed will be reported in the plant propagation manual.

Task 1c: Seed Germination Protocols. Information already exists regarding germination of many species coming from genera or families represented on the list of SSPS. Techniques for breaking seed dormancy or inducing germination include: chemical and mechanical scarification; warm and cold stratification; nutrient enrichment; and treatment with plant hormones.

Methods—Before attempting to compare germination methods, we will test each seed lot for viability according to AOSA rules for testing to establish a basis for comparing germination success among treatments. If rules have not been developed for a particular species, we will develop the techniques. We will use 2,3,5-triphenyl tetrazolium chloride, which indicates a

living embryo by staining it red. This will result in an estimated average percent viability for each species.

For each species, the range of possible germination techniques will be identified, based on current knowledge through literature research and our experience. These techniques including seed morphology, ecology, and environmental conditions will be reviewed. This reduced set of techniques will be treated as variables, which will allow **us** to form hypotheses to be tested through a completely randomized, block experiment. Variables may include treatment type, duration, associated temperatures, pH, light, stratification media, and germination substrate. Relative percent germination, defined as percent germination/percent viability, will be the success criteria. The results of germination research will be presented in narrative, tabular, and color photographic form as part of the plant propagation report.

Task Id: Propagation Protocols. For each SSPS, propagation protocols will be developed. Basic variables to be considered include: soil mixes; nutrient concentrations; watering regimes; light requirements; hardening procedures; and holding methods. Considerable information already exists about propagation of native plant species. However, even if someone has already successfully propagated a species, this does not necessarily mean they have identified the most efficient and economical method to produce that species for reintroduction into native or restored habitat. Even within species, different seed sources can respond differently because of genetic and environmental variation from germination through maturity.

Methods —Based on information already available for similar plant species, we will narrow the range of possible soil mix, nutrient, light, watering regimes, and other independent variables. **This** limited set will form the basis for hypotheses, which we will then test by performing a completely randomized factorial experiment for each species. Dependent variables will be plant quality standards used in restoration horticulture. These include height, caliper, root tightness, root to shoot ratio, biomass, absence of disease and pathogens, and other standards that might be specific to selected plant species.

During development of propagation protocols, a combination of nutrients, growth media, watering regimes and other potential factors will be varied; The selection of variables to test will **vary** by species based on existing information. Dependent variables will be selected depending on which morphological features are most important for a given species. Because some species may require more or less independent or dependent variables, statistical tests will range from univariate to multivariate analyses. However, because of the inherent variability within species, we will place at least as much weight on descriptive comparisons as we do on formal statistical results. The results of propagation protocol research will be presented in narrative, tabular, and color photographic form as part of the plant propagation report.



### ***Task 2. Determination of Habitat Requirements***

Habitat requirements will be determined for each target species by studying populations found in different areas of the Bay Delta geographical scope. A literature search will provide existing information concerning the habitat requirements for each species. The community composition and structure will be analyzed using cover and frequency studies with a modified version of Daubenmire (1959) and Bonham (1989) in parallel transects long a gradient (Whittaker, 1978). Hydrology will be monitored by establishing elevations within each study plot and comparing them against known tidal elevations. Soils will be compared with NRCS Soil Surveys for each property. An ordination will be plotted using cover and frequency (Beals, 1984).

Habitat studies will occur twice during the first year of the project since marsh communities are often dominated by different species in the spring versus the summer. Therefore, vegetation studies will occur in mid spring and again in early summer.

### ***Task 3. Establishment Pilot Project***

We will set up three establishment plots, each consisting of six 5m x 5m subplots. These plots will require pre-planting preparation to control non-native invasive species. Once site preparation is completed, the establishment plots will be planted at one-foot intervals with a combination of the dominant species found in the Habitat Requirement study plots. Twenty individuals of each target species will then be planted into each subplots.

Treatments for the establishment plots have the following variables:

1. Bare ground and herbivory exclosure
2. Coir matting and herbivory exclosure
3. Photodegradable mulch mats and herbivory exclosure
4. Bare ground and no herbivory exclosure
5. Coir matting and no herbivory exclosure
6. Photodegradable mulch mats and no herbivory exclosure

The control plots are bare ground with no herbivory exclosure. Each subplot will be monitored each year during the peak biomass period and at the end of the growing season.

**Every** individual of the target species will be recorded as either surviving or dead.

Demographic studies for each target species will be conducted to determine establishment success. A statistical analysis will include ANOVA or chi-squared depending on comparisons of variance.

## **Monitoring and Assessment Plans**

### ***Tasks 4, 5, and 6. Monitoring and Assessment***

Monitoring and assessment are integral components of this study. Baseline and annual monitoring of the establishment plots will provide information on the effectiveness of the techniques developed. In later phases, monitoring and assessment will occur on all restored habitat projects

A BRI plant ecologist and field technician will conduct the habitat studies and establishment plot monitoring. Harvest populations will be monitored to determine when seed is ready for harvest.

A baseline survey will be conducted for the establishment plots to determine the composition and structure of the species on-site prior to site prep and planting. After planting the establishment plots, monitoring will be conducted to determine the effectiveness of each plot treatment. Control of non-native invasive plants species will occur throughout the project to ensure non-native invasive species do not out-compete the natives.

### **Data Handling and Storage**

All data handling and storage will be the responsibility of BRI. Using EXCEL spreadsheets, data will be input and analyzed by BFU staff. Data stored on hard drives and zip drive backups will be made available to interested parties when requested. All hardcopies of field data will be retained in a file at the BRI office in Lincoln, CA.

### **Expected Products/Outcomes**

Three products for delivery include:

- A plant propagation manual describing and illustrating seed germination, nutrient, and other growing requirements for each species,
- A specification handbook for designers, engineers, and contractors that includes details about plant handling, site preparation, installation (including timing), management of hydrology, and maintenance of plantings), and
- A detailed report describing the community composition and structure for each target species.

### **Work Schedule**

If this proposal is funded, a literature review will commence immediately after signing the contract. Seed collection will begin in early spring and commence until all seed has been collected. Once seed is collected for a species, seed treatment and experiments will proceed. Plant propagation studies should occur once seed experiments are completed. Propagation of

species that are required for creating habitat in the establishment plots would occur in the spring/summer of 2001.

Habitat studies will begin during spring 2001 followed by a second round of vegetation surveys in early summer 2001. Baseline studies of the vegetation occupying the establishment plots will occur during the same time frame.

During the pre-rainy season (December 2001/January 2002), establishment plots will be planted. The following spring and summer, monitoring and maintenance of establishment plots will occur. Spring and summer 2003 will also consist of monitoring and maintaining establishment plots. Data evaluation and report writing follows each appropriate task accordingly.

### *Feasibility*

BRI's 14 years of experience collecting, treating and growing containerized plants from seed will result in a high quality study, will be completed on time, and within budget. BRI also has extensive experience successfully establishing plants in the field. BRI's consulting staff has conducted extensive research concerning the habitat requirements for a variety of plant species.

The proposed scope of work and time line was developed to ensure success. With the long growing season in the Central Valley and the extensive experience BRI staff, propagation protocols and the resulting plant propagation of each species should be developed during the first year of the project. BRI staff has extensive experience conducting habitat studies for plant species. The establishment plots are consistent with normal BRI field projects where site preparation, weed control and other maintenance requirements are recognized as normal operating procedures.

BIU has been working with CDFG to secure permits for this project. CDFG wants to wait until this proposal is funded before beginning the permitting process for the "taking" of protected species. Permitting for this proposal should have a short turn-around time (typically a few weeks) and also includes a permit for access to each parcel to conduct the field portions of this project. The permit for property access will be acquired 30 days prior to proposal approval.

### **Priorities**

#### *ERP Goals and CVPIA Priorities*

This project attempts to meet the needs of ERP goals 1, 2 and 4, by focusing on recovery techniques for SSPS in the Bay-Delta region. This proposal explores the need to recover at-risk species, increase plant diversity in biotic communities, and restore functional habitats that include a diverse floral and faunal component.

This project attempts to meet CVPIA priorities by focusing on tidally influenced freshwater marshes, an area used by many species of anadromous fish during some part of their life cycle. This study will provide information to meet the needs stated in the biological and non-biological principles of ecosystem management (CALFED, 2001). By restoring tidal freshwater emergent marsh habitat there will be an increase in overall biologic diversity and the reestablishment of ecosystem functions and processes necessary for the recovery of protected fish species.

#### Relationship to Other Ecosystem Restoration Projects

This research proposal relates to any habitat restoration project in the Bay-Delta region because it develops recovery techniques for **SSPS**. As areas are restored that meet the habitat requirements of **SSPS**, we can experiment with reintroducing and re-establishing viable populations of at-risk species. **We** are coordinating this proposal with phase 2 of proposal 98-C1006 Rhode Island Floodplain Management and Habitat Restoration. A similar proposal to study the 99-B127 Reintroduction of **Soft** Bird's Beak to Restored Habitat was funded in 1999. Our proposal looks at many more species **for** a fraction of the cost per species.

#### Requests for Next-Phase Funding

Not applicable at this time. If this proposal is funded, we will be requesting next phase funding.

#### Previous Recipients of CALFED or CVPLA funding

Not Applicable

#### System Wide Ecosystem Benefits

In the long term, having effective reintroduction techniques, in addition to comprehensive habitat descriptions **for** **SSPS** provides guidance to future habitat restoration projects. Incorporating **SSPS** along with uncommon restoration species into restored habitat will lead to increased biotic diversity and improved structure/function required by special status animal species. **As** the vegetative community develops, missing **or** depauperate species that require **high** quality estuarine habitat will reoccupy the areas.

By conducting this experiment in the freshwater marshes of the Delta, anadromous fish that require the estuary for part of their life cycle will have **an** increased chance of surviving. To recover these fish species, we must ensure that all habitat types necessary for their survival and successful reproduction function correctly.

## APPLICANT QUALIFICATIONS

Bitterroot Restoration is uniquely qualified to complete this project. BRI has developed propagation protocols for over **300** plant species native to the western United States and produced them in commercial quantities. John DiGregoria will be lead on this project and will oversee all aspects of project development. John will conduct all field research, seed collection, and report writing. Dr. Lu will oversee all seed collection and treatment, and the development of the propagation protocols.' Matt Ogden will conduct seed testing and treatments. Judy Krausser will conduct plant propagation experiments. Kelly Dolson will oversee site preparation and planting the establishment plots. Tom Parker and Tim Meikle will assist with project development and report writing.

### **John** DiGregoria – Restoration Ecologist, Project Manager, California Operations

**M.E.S.** Mycorrhizae in Prairie Restoration, The Evergreen State College. John has extensive experience conducting plant community studies throughout the western states, particularly wetlands in estuarine environments. John has designed and implemented restoration projects in upland communities including grasslands, white-oak savanna, chaparral, and riparian management zones. John's background includes knowledge **of** state and federal endangered species laws and regulations designed to protect at-risk species. John participated in the Federal Wetland's delineation training conducted by the U.S. Army Corps of Engineers and has worked with the Washington State Hydrogeomorphic Wetland Function Assessment Methodologies.

### Dr. Shengjun Lu – General Manager, California Operations

Ph.D. Plant Physiology, Oregon State University. Dr. Lu has extensive knowledge and experience in plant propagation, plant nutrition, heavy metal toxicity, phytoremediation, root physiology, and root-microorganism associations. Since joining BRI in 1995, Dr. Lu has conducted research and consulting projects including phytoremediation of arsenic and pentachlorophenol contaminated soils, wastewater treatment wetlands, assessment of plant mortality from chlorine spills, nutrient requirements **for** mycorrhizal-colonized plants, and soil fertility analysis. Dr. Lu has six years of experience in the research area of tree physiological responses to environmental factors, plant nutrition, root physiology, and root diseases at Oregon State University. In addition, Dr. Lu has six years experience as a director of forestry research laboratories, and as a researcher in the area of vegetation conservation, plant stress physiology, and plant community ecology in China.

### Tom Parker – Director of Consulting

M.S. Riparian Ecology, University of Montana. Tom designs and supervises implementation of bioengineered riparian and wetland restoration projects. Tom's academic work focused on the identification and delineation of wetland plant communities as well as riparian ecological health evaluation. He has completed Rosgen training in applied river morphology with expertise in the specification and application of bioengineering methods for erosion control and riparian restoration.

**Tim Meikle – Director of Research and Development**

M.S. Restoration Ecology, University of Wisconsin-Madison. Tim will provide critical review of research methods during all phases of the project. Tim has worked on ecological restoration projects in California, Nevada, Montana, Colorado, Wyoming, Alaska, Wisconsin, Minnesota, South Dakota, and North Dakota. Tim has experience in mined land reclamation, reclamation of contaminated sites, the 404 wetland permitting process, T&E species surveys and recovery efforts, vegetation reference site establishment and monitoring, utility corridor revegetation, wetland establishment, weed control and pesticide management, riparian revegetation, and grassland establishment.

**Matthew Ogden – Plant Propagation Manager**

**B.A.** Botany, **B.S.** Forest Resource Conservation, University of Montana. Matt's years at BRI have focused on seed physiology, seed collection, seed treatment and propagation technique development. In addition, Matt has extensive experience in wetland delineation, plant taxonomy, and T&E and Sensitive plant surveys.

**Judy Krausser – Plant Production Supervisor, California Operations**

B.S. Aquatic Biology, Southern Oregon State College. Judy has extensive experience working with fishery habitat both instream and terrestrial communities. Judy's lifetime experiences propagating plants began on the farm and continued through work with fisheries and her current employment with BRI. Currently Judy manages plant production at the Lincoln facility. Judy has extensive experience evaluating habitat needs for aquatic and terrestrial organisms and overall ecosystem health. Judy worked on watershed team building through the Watershed Council with projects throughout the Pacific Northwest.

**Kelly Dolson – Revegetation Services Supervisor, California Operations**

Major coursework in Horticulture, Texas Tech University. Kelly has thirty years of experience in all phase of horticulture including propagation, installation and maintenance. Kelly spent 15 years as a landscape contractor conducting design, plant salvage projects, landscaping with native species, erosion control and drip irrigation systems. Kelly is a Certified Plant Professional.

#### **Cost-Sharing**

There is no cost sharing in this proposal.

Table 1. Budget

		Subject to Overhead							Exempt from 58.2% Overhead		
Year	Task	Level	Rate	Direct Hours	Salary	Benefits	Travel	Supplies	Overhead%	Equipment & Plants	Total Cost
1	Task 1. Plant Propagation										
	Subtask 1a. Literature Search	Consultant	\$23.00	120	\$ 2,760.00	\$ 644.01	\$ 50.00		\$ 2,125.90	\$ -	\$ 5,779.90
	Subtask 1b. Seed Collection/Storage	Technician	\$15.00	75	\$ 1,125.00	\$ 344.03			\$ 2,454.62	\$ -	\$ 6,673.65
		Consultant	\$23.00	75	\$ 1,725.00	\$ 527.51	\$ 1,400.00	\$ 1,350.00	\$ 1,310.50	\$ -	\$ 3,563.01
	Subtask 1c. Seed Germination Protocols										
		Technician	\$15.00	36	\$ 562.50	\$ 172.01		\$ 675.00	\$ 620.05	\$ -	\$ 2,229.56
	Subtask 1d. Propagation Protocols										
		Technician	\$15.00	150	\$ 2,250.00	\$ 666.05		\$ 750.00	\$ 2,145.70	\$ -	\$ 5,833.75
		Technician	\$15.00	450	\$ 6,750.00	\$ 2,064.15			\$ 7,706.59	\$ -	\$ 20,952.74
	Task 2. Habitat Study	Consultant	\$17.50	525	\$ 9,187.50	\$ 2,809.54	\$ 4,232.00	\$ 200.00	\$ 6,979.66	\$ -	\$ 18,976.89
		Field	\$10.00	120	\$ 1,200.00	\$ 366.96			\$ 6,435.25	\$ -	\$ 17,496.21
	Task 3. Establishment Plots	Consultant	\$17.50	30	\$ 525.00	\$ 160.55	\$ 1,300.00	\$ 6,194.00	\$ 398.85	\$ -	\$ 1,084.39
	Task 4. Monitoring	Technician	\$15.00	30	\$ 450.00	\$ 137.61			\$ 764.04	\$ -	\$ 2,131.65
	Establishment Plots	Consultant	\$23.00	30	\$ 690.00	\$ 211.00	\$ 760.00		\$ 524.20	\$ -	\$ 1,425.20
	Project Management	Consultant	\$23.00	600	\$ 13,800.00	\$ 4,220.04	\$ 300.00		\$ 10,658.57	\$ -	\$ 28,978.61
	Report Writing	Consultant	\$23.00	270	\$ 6,210.00	\$ 1,899.02		\$ 1,000.00	\$ 5,299.61	\$ -	\$ 14,408.63
Total Cost Year 1					\$47,235.00	\$14,444.48	\$ 8,042.00	\$12,169.00	\$47,643.74	\$ -	\$129,534.20
2	Task 5. Monitoring	Technician	\$15.00	30	\$ 450.00	\$ 137.61			\$ 784.04	\$ -	\$ 2,131.65
	Establishment Plots	Consultant	\$23.00	30	\$ 690.00	\$ 211.00	\$ 760.00		\$ 524.20	\$ -	\$ 1,425.20
	Project Management	Consultant	\$23.00	45	\$ 1,035.00	\$ 316.50	\$ 300.00		\$ 960.64	\$ -	\$ 2,612.34
	Report Writing	Consultant	\$23.00	60	\$ 1,380.00	\$ 422.00		\$ 1,000.00	\$ 1,630.20	\$ -	\$ 4,432.21
	Total Cost Year 2				\$ 3,555.00	\$ 1,087.12	\$ 1,060.00	\$ 1,000.00	\$ 3,899.28	\$ -	\$ 10,601.40
3	Task 6 Monitoring	Technician	\$15.00	30	\$ 450.00	\$ 137.61			\$ 784.04	\$ -	\$ 2,131.65
	Establishment Plots	Consultant	\$23.00	30	\$ 690.00	\$ 211.00	\$ 760.00		\$ 524.20	\$ -	\$ 1,425.20
	Project Management	Consultant	\$23.00	45	\$ 1,035.00	\$ 316.50	\$ 300.00		\$ 960.84	\$ -	\$ 2,612.34
	Report Writing	Consultant	\$23.00	60	\$ 1,360.00	\$ 422.00		\$ 1,000.00	\$ 1,630.20	\$ -	\$ 4,432.21
	Total Cost Year 3				\$ 3,555.00	\$ 1,087.12	\$ 1,060.00	\$ 1,000.00	\$ 3,899.28	\$ -	\$ 10,601.40
Total Project Cost					\$54,345.00	\$16,618.70	\$10,162.00	\$14,169.00	\$55,442.30	\$ -	\$150,737.00

Employee benefits costs include Holiday, vacation, sick, medical, and payroll tax accrual (30.58%).

Overhead expense include:

Rent, Utility, Insurance, Telephone office supply, and computer expense (8.9%)

Selling Expense allocation (13.3%)

General and Administrative Expense allocation (22.6%)

Interest Expense Allocation (4.7%)

Margin allocation (6.7%)

Total Overhead 58.2%

Table 2. Budget per Quarter

Table 2: Budget per Quarter				Quarterly Expenses						
Task	1st 01	2nd 01	3rd 01	4th 01	1st 02	2nd 02	3rd 02	1st 03	2nd 03	3rd 03
Task 1. Plant Propagation										
Subtask 1a. Literature Search	\$5,779.90									
Subtask 1b. Seed Collection/Storage		\$6,023.00	\$4,213.66							
Subtask 1c. Seed Germination Protocols		\$1,500.00	\$729.56							
Subtask 1d. Propagation Protocols			\$5,833.75							
Task 2. Habitat Study		\$19,964.82	\$19,964.82							
Task 3. Establishment Plots				\$18,580.60						
Task 4. Monitoring Establishment Plots		\$1,778.43	\$1,778.42							
Project Management	\$7,244.65	\$7,244.65	\$7,244.65	\$7,244.66						
Report Writing	\$3,602.15	\$3,602.15	\$3,602.15	\$3,602.18						
Task 5. Monitoring Establishment Plots						\$1,778.43	\$1,778.42			
Project Management						\$1,306.17	\$1,306.17			
Report Writing					\$432.21	\$2,000.00	\$2,000.00			
Task 6 Monitoring Establishment Plots									\$1,778.43	\$1,778.42
Project Management									\$1,306.17	\$1,306.17
Report Writing								\$432.21	\$2,000.00	\$2,000.00



## **Local Involvement**

This proposal has been coordinated with USFWS and California State agencies including the Department of Fish and Game and Water Resources. These agencies seem supportive of this proposal at this time.

**This** proposal only researches tidally influenced freshwater marshes in the Bay-Delta region. We have received support for this proposal from state agency personnel conducting business in the Bay-Delta region. The establishment pilot project sites occur on the same parcel of land as the Phase 2 proposal 98-C1006 Rhode Island Floodplain Management and Habitat Restoration.

During the course of proposal development, we attempted to work with the Solano County Farmland and Open Space Foundation. They are not interested in working with us at this time. We also contacted the Cosumnes River Preserve and they are too busy at this time.

We contacted the California Native Plant Society (CNPS) to see if they are interested in participating in this research. Spokespersons with CNPS stated that their organization is against any form of propagation experiments with California State protected species or CNPS listed species for fear that developers will begin destroying rare plants and their habitat since replacements can be made. We are not conducting this research for developers to **destroy** existing at-risk plant species and their habitat. We feel that the results from this research proposal will allow the reintroduction of at-risk plant species into future restoration projects. Reestablishing viable populations of sensitive plant species throughout their historic range will decrease rarity and increase each species chance of surviving into the future.

The three expected products produced by this research are available to all engineers, contractors, and restoration professionals who conduct ecological restoration in the Bay-Delta region. Upon completion of this research project, all products will be available through the CALFED web site or directly through BRI.

BRI sent a copy of this proposal with an introductory cover letter to all government agencies with jurisdiction over the lands where field portions of this experiment will be conducted. Copies of the cover letters are attached.

## **Compliance with Standard Terms and Conditions**

BRI will comply with the Standard Terms and Conditions as stated in Attachments D and E of the 2001 Proposal solicitation Package.

## **Literature Cited**

- Beals, E.W. 1984. Bray-Curtis ordination: an effective strategy for the analysis of multivariate ecological data. *Advances in Ecological Research* 14:1-55.
- Bonham, C.D. 1989. Measurements for terrestrial vegetation. Wiley, New York. P. 338.
- CALFED. 1999. CALFED Bay-Delta Program: Programmatic Environmental Impact Statement/Environmental Impact Report. Documents 301-312. June.
- CALFED. 2001. CALFED Bay-Delta Program: 2001 Proposal Solicitation Package.
- California Department of Fish and Game (CDFG). 1997. Guidelines for conducting research on rare, threatened and endangered plants and plant communities. **August**.
- Daubenmire, R. 1959. A canopy-coverage method of vegetational analysis. *Northwest Science* 33(1):43-64.
- Endangered Species Act (ESA). 1973. 50 C.F.R. 17
- Whittaker, R.H. 1978. Direct Gradient Analysis. In Ordination of Plant Communities. (ed) R. H. Whittaker. The Hague, Boston. Pp. 7-50.

## **Threshold Requirements**

# Environmental Compliance Checklist

All applicants must fill out this Environmental Compliance Checklist. Applications must contain answers to the following questions to be responsive and to be considered for funding. **Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for-funding.**

1. Do any of the actions included in the proposal require compliance with either the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), or both?

✓  
YES

        
NO

2. If you answered yes to # 1, identify the lead governmental agency for CEQA/NEPA compliance.

California Department of Fish and Game  
Lead Agency

3. If you answered no to # 1, explain why CEQA/NEPA compliance is not required for the actions in the proposal.

Lilaeopsis masonii is a California State protected plant species. To collect seed or plant parts requires a permit to "take." See attached letter from CDFG.

4. If CEQA/NEPA compliance is required, describe how the project will comply with either or both of these laws. Describe where the project is in the compliance process and the expected date of completion.

5. Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal?

✓  
YES

        
NO

If yes, the applicant must attach written permission for access from the relevant property owner(s). Failure to include written permission for access may result in disqualification of the proposal during the review process. Research and monitoring field projects for which specific field locations have not been identified will be required to provide access needs and permission for access with 30 days of notification of approval.

We are in the process of getting permission. See attached e-mails, We will submit permission letters prior to 30 days of notification of approval.

6. Please indicate what permits or other approvals may be required for the activities contained in **your** proposal. Check all boxes that apply.

**LOCAL**

Conditional use permit  
 Variance  
 Subdivision Map Act approval  
 Grading permit  
 General plan amendment  
 Specific plan approval  
 Rezone  
 Williamson Act Contract  
 cancellation  
 Other \_\_\_\_\_  
 (please specify)  
 None required

\_\_\_\_\_  
 \_\_\_\_\_  
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 \_\_\_\_\_  
 \_\_\_\_\_  
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**STATE**

CESA Compliance  
 Streambed alteration permit  
 CWA § 401 certification  
 Coastal development permit  
 Reclamation Board approval  
 Notification  
 Other Taking permit to collect plant seed part.  
 (please specify)  
 None required

\_\_\_\_ (CDFG)  
 \_\_\_\_ (CDFG)  
 \_\_\_\_ (RWQCB)  
 \_\_\_\_ (Coastal Commission/BCDC)  
 \_\_\_\_ (DPC, BCDC)  
 \_\_\_\_\_

**FEDERAL**

ESA Consultation  
 Rivers & Harbors Act permit  
 CWA § 404 permit  
 Other \_\_\_\_\_  
 (please specify)  
 None required

\_\_\_\_ (USFWS)  
 \_\_\_\_ (ACOE)  
 \_\_\_\_ (ACOE)  
 \_\_\_\_\_

DPC = Delta Protection Commission  
 CWA = Clean Water Act  
 CESA = California Endangered Species Act  
 USFWS = U.S. Fish and Wildlife Service  
 ACOE = U.S. Army Corps of Engineers

ESA = Endangered Species Act  
 CDFG = California Department of Fish and Game  
 RWQCB = Regional Water Quality Control Board  
 BCDC = Bay Conservation and Development Commission

## Land Use Checklist

All applicants must fill out this Land Use Checklist for their proposal. Applications must contain answers to the following questions to be responsive and to be considered for funding. *Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding*

1. Do the actions in the proposal involve physical changes to the land (i.e. grading, planting vegetation, or breaching levees) or restrictions in land use (i.e. conservation easement *or* placement of land in a wildlife refuge)?

☒ YES

☐ NO

2. If **NO** to # 1, explain what type of actions are involved in the proposal (i.e., research only, planning only).

3. If **YES** to # 1, what is the proposed land use change or restriction under the proposal?

Three 10mX15m plots. Vegetation control of non-natives as site prep.  
Plots will be planted with native species and the five target species

4. If **YES** to # 1, is the land currently under a Williamson Act contract?

☐ YES

☒ NO

5. If **YES** to # 1, answer the following:

Current land use

Current zoning

Current general plan designation

Wildlife Reserves

Wildlife Reserves

6. If **YES** to #1, is the land classified as Prime Farmland, Farmland of Statewide Importance or Unique Farmland on the Department of Conservation Important Farmland Maps?

☐ YES

☒ NO

☐ DON'T KNOW

7. If **YES** to # 1, how many acres of land will be **subject to** physical change or land use restrictions under the proposal?

8. If **YES** to # 1, is the property currently being commercially farmed or grazed?

☐ YES

☒ NO

9. If **YES** to #8. what are

the number of employees/acre                     

the total number of employees

10. Will the applicant acquire any interest in land under the proposal (fee title **or** a conservation easement)?

YES

**NO**

11. What entity/organization will hold the interest? California State

12. If YES to # 10, answer the following:

Total number of acres to be acquired under proposal

Number of acres to be acquired in fee

**Number of acres to be subject to conservation easement**

13. For all proposals involving physical changes to the land or restriction in land use, describe what entity or organization will:

manage the property

provide operations **and** maintenance services

conduct monitoring

CDFG

CDFG: BRI-plot maintenance

BRI

- 14. For land acquisitions (fee title or easements), will existing water rights also be acquired?**

# YES

**NO**

15. Does the applicant propose any modifications to the water right **or** change in the delivery of the water?

**YES**

NO

16. If **YES** to # 15, describe

STATE OF CALIFORNIA

## NONDISCRIMINATION COMPLIANCE STATEMENT

STD. 19 (REV. 3-95) FMC

COMPANY NAME

Bitterroot Restoration, Inc. 445 Quast Lane, Corvallis, MT 59828

The company named above (hereinafter referred to as "prospective contractor") hereby ~~certifies~~ unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer) age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

## CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to Legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California

OFFICIAL'S NAME

Leonard Ballek

DATE EXECUTED

May 11, 2000

EXECUTED IN THE COUNTY OF

Ravalli County

PROSPECTIVE CONTRACTOR'S SIGNATURE

PROSPECTIVE CONTRACTOR'S TITLE

Vice President

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

Bitterroot Restoration, Inc.

PART E: Certification Regarding Lobbying  
 Certification ~~for~~ Contracts, Grants, Loans, and Cooperative Agreements

CHECK ☐ IF CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND THE AMOUNT EXCEEDS \$100,000: A FEDERAL GRANT OR COOPERATIVE AGREEMENT, SUBCONTRACT, OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.

CHECK ☐ IF CERTIFICATION IS FOR THE AWARD OF A FEDERAL LOAN EXCEEDING THE AMOUNT OF \$150,000, OR A SUBGRANT OR SUBCONTRACT EXCEEDING \$100,000, UNDER THE LOAN.

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

*Leonard Ballek*

Leonard Ballek

TYPED NAME AND TITLE Leonard Ballek, Vice President

DATE May 11, 2000

DI-2010

March 1995

(This form consolidates DI-1953, DI-1954,

DI-1955, DI-1956 and DI-1963)



APPLICATION FOR  
FEDERAL ASSISTANCE

<b>1. TYPE OF SUBMISSION:</b> Application <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		<b>2. DATE SUBMITTED</b> May 15, 2000 <b>3. DATE RECEIVED BY STATE</b> State Application Identifier <b>4. DATE RECEIVED BY FEDERAL AGENCY</b> Federal Identifier 1-0440317																													
<b>5. APPLICANT INFORMATION</b> Legal Name: <b>BITTERROOT RESTORATION, INC.</b> Address (give city, county, state, and zip code): 445 Quast Lane Corvallis, Montana 59828 <b>6. EMPLOYER IDENTIFICATION NUMBER (EIN):</b> 13A45304664																															
<b>B. TYPE OF APPLICATION:</b> <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es) <input type="checkbox"/> [ ] A. Increase Award    B. Decrease Award    C. Increase Duration D. Decrease Duration    Other (specify):		<b>7. TYPE OF APPLICANT: (enter appropriate letter in box)</b> <table style="width:100%;"> <tr> <td>A. State</td> <td>H. Independent School Dist.</td> </tr> <tr> <td>B. County</td> <td>I. State Controlled Institution of Higher Learning</td> </tr> <tr> <td>C. Municipal</td> <td>J. Private University</td> </tr> <tr> <td>D. Township</td> <td>K. Indian Tribe</td> </tr> <tr> <td>E. Interstate</td> <td>L. Individual</td> </tr> <tr> <td>F. Intermunicipal</td> <td>M. Profit Organization</td> </tr> <tr> <td>G. Special District</td> <td>N. Other (Specify)</td> </tr> </table> <b>8. NAME OF FEDERAL AGENCY:</b> CALFED		A. State	H. Independent School Dist.	B. County	I. State Controlled Institution of Higher Learning	C. Municipal	J. Private University	D. Township	K. Indian Tribe	E. Interstate	L. Individual	F. Intermunicipal	M. Profit Organization	G. Special District	N. Other (Specify)														
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G. Special District	N. Other (Specify)																														
<b>10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE</b> NUMBER TITLE: <b>12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.):</b> Solano, Contra Costa, San Joaquin, Sacramento and Yolo Counties		<b>11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:</b> Researching, propagation and habitat requirements for at risk plant species.																													
<b>13. PROPOSED PROJECT</b> Rare Plants Study Start Date: 2/2001    Ending Date: 12/2003 <b>14. CONGRESSIONAL DISTRICTS OF</b> 3rd, 4th 5th, 7th, 10th and 11th		<b>15. ESTIMATED FUNDING:</b> Funded by Federal or State funds from CALFED program <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>a. Federal</td> <td>a</td> <td>\$</td> <td>150,737 or</td> </tr> <tr> <td>b. Applicant</td> <td>\$</td> <td></td> <td></td> </tr> <tr> <td>c. State</td> <td>\$</td> <td></td> <td>150,737</td> </tr> <tr> <td>d. Local</td> <td>\$</td> <td></td> <td></td> </tr> <tr> <td>e. Other</td> <td>\$</td> <td></td> <td></td> </tr> <tr> <td>f. Program Income</td> <td>a</td> <td>m</td> <td></td> </tr> <tr> <td>g. TOTAL</td> <td>\$</td> <td></td> <td>150,737</td> </tr> </table>		a. Federal	a	\$	150,737 or	b. Applicant	\$			c. State	\$		150,737	d. Local	\$			e. Other	\$			f. Program Income	a	m		g. TOTAL	\$		150,737
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e. Other	\$																														
f. Program Income	a	m																													
g. TOTAL	\$		150,737																												
<b>16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?</b> a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____ b. NO. <input checked="" type="checkbox"/> PROGRAM IS NOT COVERED BY E.O. 11372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW																															
<b>17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?</b> <input type="checkbox"/> Yes    If "Yes," attach an explanation. <input checked="" type="checkbox"/> No																															
<b>18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.</b> <table style="width:100%;"> <tr> <td>a. Type Name of Authorized Representative <b>Leonard Ballek</b></td> <td>b. Title Vice President</td> <td>c. Telephone Number 406 961-</td> </tr> <tr> <td colspan="2">d. Signature of Authorized Representative <i>Leonard Ballek</i></td> <td>e. Date Signed May 11, 2000</td> </tr> </table>				a. Type Name of Authorized Representative <b>Leonard Ballek</b>	b. Title Vice President	c. Telephone Number 406 961-	d. Signature of Authorized Representative <i>Leonard Ballek</i>		e. Date Signed May 11, 2000																						
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Previous Edition Usable

Authorized for Local Reproduction

Standard Form 424 (Rev. 7-97)

Prescribed by OMB Circular A-102

## INSTRUCTIONS FOR THE SF-424

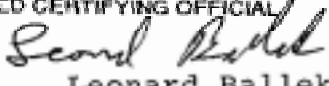
Public reporting burden for this collection of information is estimated to average 45 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0043), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

This is a standard form used by applicants as a required facesheet for preapplications and applications submitted for Federal assistance. It will be used by Federal agencies to obtain applicant certification that States which have established a review and comment procedure in response to Executive Order 12372 and have selected the program to be included in their process, have been given an opportunity to review the applicant's submission.

- | Item:  | Entry:  | Item: | Entry:   |
|--|---|-------|--|
| 1.   | Self-explanatory.   | 12.   | List only the largest political entities affected (e.g., State; counties, cities).   |
| 2.   | Date application submitted to Federal agency (or State if applicable) and applicant's control number (if applicable).   | 13.   | Self-explanatory.  |
| 3.   | State use only (if applicable).   | 14.   | List the applicant's Congressional District and any District(s) affected by the program or project.  |
| 4.   | If this application is to continue or revise an existing award, enter present Federal identifier number. If for a new project, leave blank.   | 15.   | Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions should be included on appropriate lines as applicable. If the action will result in a dollar change to an existing award, indicate <u>only</u> the amount of the change. For decreases, enclose the amounts in parentheses. If both basic and supplemental amounts are included, show breakdown on an attached sheet. For multiple program funding, use totals and show breakdown using same categories as item 15. |
| 5.   | Legal name of applicant, name of primary organizational unit which will undertake the assistance activity, complete address of the applicant, and name and telephone number of the person to contact on matters related to this application.  | 16.   | Applicants should contact the State Single Point of Contact (SPOC) for Federal Executive Order 12372 to determine whether the application is subject to the State intergovernmental review process.  |
| 6.   | Enter Employer Identification Number (EIN) as assigned by the Internal Revenue Service.   | 17.   | If this question applies to the applicant organization, not the person who signs as the authorized representative. Categories of debt include delinquent audit disallowances, loans and taxes.   |
| 7.   | Enter the appropriate letter in the space provided.   | 18.   | To be signed by the authorized representative of the applicant. A copy of the governing body's authorization for you to sign (his application as official representative must be on file in the applicant's office. (Certain Federal agencies may require that this authorization be submitted as part of the application.)  |
| 8.   | Check appropriate box and enter appropriate letter(s) in the space(s) provided.   |       |  |
| <input type="checkbox"/> "New" means a new assistance award.   |   |       |  |
| <input type="checkbox"/> "Continuation" means an extension for an additional funding/budget period for a project with a projected completion date.         |   |       |  |
| <input type="checkbox"/> "Revision" means any change in the Federal Government's financial obligation or contingent liability from an existing obligation. |   |       |  |
| 9.   | Name of Federal agency from which assistance is being requested with this application.  |       |  |
| 10.  | Use the Catalog of Federal Domestic Assistance number and title of the program under which assistance is requested.   |       |  |
| 11.  | Enter a brief descriptive title of the project. If more than one program is involved, you should append an explanation on a separate sheet. If appropriate (e.g., construction or real property projects), attach a map showing project location. For preapplications, use a separate sheet to provide a summary description of this project. |       |  |

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. 5874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental Standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738 (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 5470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL  Leonard Ballek		TITLE Vice President	
APPLICANT ORGANIZATION Bitterroot Restoration, Inc.		DATE SUBMITTED May 11, 2000	

SECTION C - NON-FEDERAL RESOURCES					
(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS	
8. CALFED if not funded by Federal \$	\$	\$150,737.00	\$	\$150,737.00	
9.					
10.					
11.					
12. TOTAL (sum of lines 8-11)	\$	\$150,737.00	\$	\$150,737.00	
SECTION D - FORECASTED CASH NEEDS					
	Total for 1st Year	1st Quarter		2nd Quarter	
13. Federal	\$				
14. Non-Federal					
15. TOTAL (sum of lines 13 and 14)	\$				
SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT					
(a) Grant Program	FUTURE FUNDING PERIODS (Years)				(e) Fourth
	(b) First	(c) Second	(d) Third		
16.	\$	\$	\$	\$	
17.					
18.					
19.					
20. TOTAL (sum of lines 16-19)	\$	\$	\$	\$	\$
SECTION F - OTHER BUDGET INFORMATION					
21. Direct Charges: \$95,294.70	22. Indirect Charges: \$55,442.30				
23. Remarks: This is for a CALFED proposal to be funded in full by either federal or state dollars,					

## BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 0348.0044

## SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. CALFED		\$ 150,737.00	\$	\$	\$	\$ 150,737.00
2.						
3.						
4.						
5. Totals		\$ 150,737.00	\$	\$	\$	\$ 150,737.00

## SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1)	(2)	(3)	(4)	
a. Personnel	\$ 54,345.00	\$	\$	\$	\$
b. Fringe Benefits	16,618.70				
c. Travel	10,162.00				
d. Equipment					
e. Supplies	14,169.00				
f. Contractual					
g. Construction					
h. Other					
i. Total Direct Charges (sum of 6a-6h)	95,294.70				
j. Indirect Charges	55,442.30				
k. TOTALS (sum of 6i and 6j)	\$ 150,737.00	\$	\$	\$	\$
7. Program Income	\$	\$	\$	\$	\$

Authorized for Local Reproduction

Previous Edition Usable

Standard Form 424A (Rev. 7-97)  
Prescribed by OMB Circular A-102

**Correspondence with California Department of Fish and  
Game Concerning the Use of State Lands and a Takings  
Permit for *Lilaeopsis masonii***



**DEPARTMENT OF FISH AND GAME**

<http://www.dfg.ca.gov>  
1416 Ninth Street  
Sacramento, CA 95814  
(916) 653-9767



May 9, 2000

Mr. John DiGregoria  
Restoration Ecologist  
Bitterroot Restoration, Inc.  
55 Sierra College Road  
Lincoln, California 95648

Dear Mr. DiGregoria:

Population/Establishment Techniques and Habitat Requirements for Special Status Plant Species

The Species Conservation and Recovery Program will issue a Research Permit to Bitterroot Restoration, Inc. for its proposed work on the state listed rare plant, Mason's lilaeopsis (*Lilaeopsis masonii*) if the work follows our Research Guidelines. We can issue the permit when the details of the research have been finalized, after your proposal has been funded. Based on conversations between Ms. Diana Hickson of our staff and yourself, we do not foresee any barriers to making your work consistent with our Guidelines. If you have any questions, please call me at (916) 653-9767.

Sincerely,

Sandra C. Morey, Supervisor  
Species Conservation and Recovery Program  
Habitat Conservation Planning Branch

cc: Ms. Diana Hickson  
Department of Fish and Game  
Sacramento, California

Subject: Re: (no subject)  
Date: Wed, 03 May 2000 16:36:11 -0700  
From: Bonnie Turner <BTurner@dfg.ca.gov>  
To: brical@pacbell.net  
CC: Diana Hickson <DHickson.PO\_HQ.DOM\_HQ@dfg.ca.gov>,  
Patricia Perkins <PPerkins.PO\_ITB.DOM\_ITB@dfg.ca.gov>,  
Sandra Morey <SMorey.PO\_HQ.DOM\_HQ@dfg.ca.gov>, jsingle@dfg2.c  
a.gov

Hi John, I think you really need to contact Region 2 - Patricia Perkins at 916-358-3868 and Region 4 - Jeff Single (559) 243-4020 and talk to them about the lands in their respective regions. Region 2 manages Gray Lodge, Calhoun Cut ER< Sherman Island, Decker and Rhode Islands. Region 4 manages Mendota, Calif Aqueduct, Kerman, Alkali Sink. We don't manage Frank's Tract. I think it might be State Parks. FYI, Ed Littrell is retiring soon, and he works at Region 2 also. You might get a contact from him for his replacement. The regions will grant you the permits, with language suited to your proposal. The permit should suffice for support of your proposal, but if you need more, you need to give them enough notice so they can do it....May 15 is not far away. Good luck on your project.

>>> brical <brical@pacbell.net> 05/03/2000 3:58:26 PM >>>  
Bonnie,

I have been modifying the proposal to make it more feasible. Roxanne Bittman provided me with a short list connecting the target species in our proposal with populations on state, federal and private lands.

After reviewing this list, we are requesting the use of particular state

lands for this proposal.

Franks Tract, Calhoun Cut Sherman Island, Gray Lodge, Alkali Sink, Kerman, California Aqueduct and Mendota. We are seeking permission to use these properties for the habitat study and the collection of seed and potentially plant parts.



I contacted Curt Schmutte from CDWR looking for a place in the delta area to conduct the establishment pilot project. Curt connected me with

Ed Littrell. Ed was enthusiastic and is interested in using Deckers Island and Rhode Island for the establishment plots. I believe this is also state land and should be added to our request.

We will need a letter of support for this project from your organization. This should include permission to use state lands for this project as well as support for the development of methodologies to allow us to move forward towards delisting at-risk plant species.

If any of the lands we are requesting to use or if any of the species we

are interested in are problematic feel free to call me and we can modify the proposal accordingly.

Feel free to contact me with any questions or concerns. The May 15 deadline is getting closer so I would appreciate a quick response to my request.

I will be leaving for the California Native Grass Association meeting in

San Luis Obispo on the afternoon of May 10 and returning on Saturday May

13. Could you respond prior to May 10.

Thank you.

John DiGregoria

Subject: CalFed proposal for rare plant research

Date: Fri, 21 Apr 2000 15:29:39 -0700

From: Diana Hickson <DHickson@dfg.ca.gov>

To: Bonnie Turner <BTurner.PO\_HQ/DOM\_HQ@dfg.ca.gov>,  
Gene Cooley <GCOOLEY.PO\_REM.DOM\_ITB@dfg.ca.gov>,  
Roxanne Bittman <RBittman.PO\_ITB.DOM\_ITB@dfg.ca.gov>,  
Teresa LEBLANC <TLEBLANC.PO\_REM.DOM\_ITB@dfg.ca.gov>, mgriggs@dfg2.ca.gov  
CC: Sandra Morey <SMorey.PO\_HQ.DOM\_HQ@dfg.ca.gov>, Kenneth\_Fuller@fws.gov,  
brical@parbell.net

Hi Bonnie, Teresa, Gene, Mary Ann, and Roxanne (and Ken, see question about FWS approval),

John DiGregoria, Restoration Ecologist at Bitterroot Restoration, is preparing a proposal to Cal Fed to conduct research as described below. Bitterroot needs:

1) help determining which of the species listed in the proposal below occur on which of our lands, [Roxanne and Bonnie: has this analysis already been done for another purpose? can you please call or email John DiGregoria and let him know soon (see contact info at end of email)?]

2) permission to monitor reference populations on our lands and collect seeds/plant material from the populations on our land, (Teresa, Gene and Mary Ann, you'll probably be involved at this stage next spring) and

3) permission to introduce experimental populations, if appropriate (Teresa, Gene, Mary Ann, Bonnie, you'll probably all be involved next spring).

Bonnie, I think this needs to come from your branch: Immediately, they need a letter from DFG stating that we'll allow them, at a minimum, to monitor reference populations on our lands, and above that, take seed or plant material from populations on our lands and possibly introduce experimental pop's on our lands. Details of any research will be worked out after the award (probably next spring). Do we have a Dept policy for promoting this?

HCPB will need to work with the plant ecologists to write permits for the state-listed species (e.g., Mason's lilaeopsis, Cordylanthus mollis mollis. C. palmatus), probably next spring.

Several plants are federally listed, so I assume the feds would need to do internal consultation to allow federal funding of research that will take the species (true, Ken?).

**Subject: CalFed proposal for rare plant research**

**Date:** Fri, 21 Apr 2000 15:29:39 -0700

**From:** Diana Hickson <DHickson@dfg.ca.gov>

**To:** Bonnie Turner <BTurner.PO\_HQ.DOM\_HQ@dfg.ca.gov>,  
Gene Cooley <GCOOLEY.PO\_REM.DOM\_ITB@dfg.ca.gov>,  
Roxanne Bittman <RBittman.PO\_ITB.DOM\_ITB@dfg.ca.gov>,  
Teresa LEBLANC <TLEBLANC.PO\_REM.DOM\_ITB@dfg.ca.gov>, mgriggs@dfg2.ca.gov

**CC:** Sandra Morey <SMorey.PO\_HQ.DOM\_HQ@dfg.ca.gov>, Kenneth\_Fuller@fws.gov,  
brical@pacbell.net

Hi Bonnie, Teresa, Gene, Mary Ann, and Roxanne (and Ken, see question about FWS appr  
John DiGregoria, Restoration Ecologist at Bitterroot Restoration, is preparing a prop  
1) help determining which of the species listed in the proposal below occur on whic  
2) permission to monitor reference populations on **our** lands and collect seeds/plant  
3) permission to introduce experimental populations, if appropriate (Teresa, Gene, M  
Bonnie, I think this needs to come from your branch: Immediately, they need a lette  
HCPB will need to work with the plant ecologists to write permits for the state-list  
Several plants are federally listed, so I assume the feds would need to do internal  
Here is the information John cut from the proposal:

The revegetation projects associated with habitat restoration are often lacking in p  
species diversity should result in increased diversity of fauna. This increase in p

By developing propagation and establishment techniques, SSPS can be successfully rei

This project researches the following SSPS and habitat types (SE = saline emergent,  
(FED=Fed listed, CR=CA rare, CE=CA endangered, CNPS= on CNPS inventory)

FED	Cirsium hydrophilum	hydrophilum	Suisun thistle	SE
CR/FED	Cordylanthus mollis	mollis	Soft bird*s beak	SE
CNPS	Lathyrus jepsonii	jepsonii	Delta tule pea	SE, TFE
CR	Lilaeopsis masonii	Mason*s lilaeopsis	TFE	
CNPS	Aster lentus	Suisun marsh aster	TFE	
CNPS	Limosella subulata	Delta mudwort	TFE	
CNPS	Hibiscus lasiocarpus	Rose-mallow	TFE, NSW	
CE/FED	Cordylanthus palmatus	Palmate-bracted bird*s beak	NSW	
FED	Lembertia congdonii	San Joaquin woolythreads	NSW, G	
CNPS	Atriplex depressa	Brittlescale	NSW, G	
CNPS	Delphinium recurvatum	Recurved larkspur	NSW, G, VFW	
FED	Eriastrum hooveri	Hoover*s eriastrum	G	

The objectives **of** this proposal are: 1) to develop an understanding of the seed phys

**Phases and Tasks**

- Phase 1. Saline Emergent, Tidal Freshwater Emergent, Natural Seasonal Wetlands, and
- Task 1a) Literature Review
- Task 1b) Seed acquisition/collection storage
- Task 1c) Seed germination protocols
- Task 1d) Propagation protocols
- Task 2) Establishment pilot project
- Task 3) Baseline monitoring of establishment plots and native communities
- Task 4) First year monitoring of establishment plots and native communities
- Task 5) Second year monitoring of establishment plots and native communities

Phase 2a. Saline Emergent, Tidal Freshwater Emergent, Natural Seasonal Wetlands, and  
Task 1) Third year monitoring of establishment plots and native communities  
Task 2) Fourth year monitoring of establishment plots and native communities  
Task 3) Fifth year monitoring of establishment plots and native communities

Phase 2b. Saline Emergent, Tidal Freshwater Emergent, Natural Seasonal Wetlands, and  
Task 1) Baseline vegetation study of restoration project area  
Task 2) Site design for large-scale restoration project based on native community st  
Task 3) Seed collection and propagation of species required for restoration project  
Task 4) Site preparation of restoration project area  
Task 5) Planting in restoration project area  
Task 6) Second year annual monitoring of restoration project area  
Task 7) Third year annual monitoring of restoration project area

John DiGregoria  
Restoration Ecologist  
Bitterroot Restoration  
(916)434-9695.  
brical@pacbell.net

**Subject: Re: Calfed proposal**

**Date:** Wed, 26 Apr 2000 10:59:25 -0700

**From:** Curtis Schmutte <schmutte@water.ca.gov>

**To:** brical <brical@pacbell.net>

John -- DFG's comments below

Curt

Date: Mon, 24 Apr 2000 08:54:47 -0700

From: "Ed Littrell" <ELittrel@dfg.ca.gov>

To: <schmutte@water.ca.gov>

Subject: Re: Fwd: Calfed proposal

Mime-Version: 1.0

Re: Experimental propagation of native plants.

1. Add Rhode Island to list if CALFED approves project there.
2. I'd like to have a short discussion with the proponent about a couple of the plant species we're interested in.

>Hi,

>

>This email is a followup to the discussion we had 4/19 concerning  
>utilizing Twitchell Island or Decker Island for a pilot planting project  
>for special status plant species.

>

>Attached is a draft of the proposal for your review. Could you provide  
>this proposal for review to all parties affiliated with decision making  
>at these properties. If you or any of your associates have any concerns  
>or questions feel free to call (916) 434-9695. Thank you.

>

>John DiGregoria  
>Restoration Ecologist  
>Bitterroot Restoration

>

>Attachment converted: Macintosh HD:PSP Cover Sheet Form.doc (WDBN/MSWD)  
>(0001B2D8)

Subject: Re: Rhode Island  
Date: Mon, 08 May 2000 16:00:36 -0700  
From: Ed Littrell <ELittrel@dfg.ca.gov>  
To: brical@pacbell.net

Rhode Island is in Contra Costa County.

As for written permission *for* test plots at Rhode and Decker Islands: **I** think we'll need some kind of paper trail on that one. I've seen no written proposal *for* what the plots would look like, what species, etc.

I don't think we have enough time to develop that proposal. At this stage, I think we can only say that you are in discussions with DFG for testing propagation techniques on **DFG** properties in the Delta.

Ed

RE: CALFED proposal

**Subject: RE: CALFED proposal**

**Date:** Sun, 07 May 2000 21:13:28 -0700

**From:** Mike Eaton <meaton@cosumnes.org>

**To:** brical <brical@pacbell.net>

John -

My staff have been slow to give me feedback on this, probably because they too are immersed in CALFED proposal-writing.

The bottom line is that we're going to pass. They have concerns about the concept. The concerns may be resolvable, but not in the time available.

Sorry.

Mike

-----Original Message-----

From: brical [<mailto:brical@pacbell.net>]

Sent: Tuesday, May 02, 2000 9:45 AM

To: meaton@cosumnes.org

Subject: CALFED proposal

Hi,

This email is a followup to the last email that I sent to you that included our CALFED proposal.

Have you had a chance to review the proposal for developing propagation techniques **for** reintroducing at-risk plant species back into their historical range?

We are curious whether your organization is interested in participating in this project.

We face a May 15 deadline and appreciate a quick response. Thank you

John DiGregoria  
Restoration Ecologist  
(916) 434-9695  
Bitterroot Restoration, Inc.

## Maps of the General Research Area

The first map shows the general ~~area~~ where research will be conducted.

The second map is a 7.5 min. map of the Calhoun Cut area.

The third map is a 7.5 min. map of Decker Island

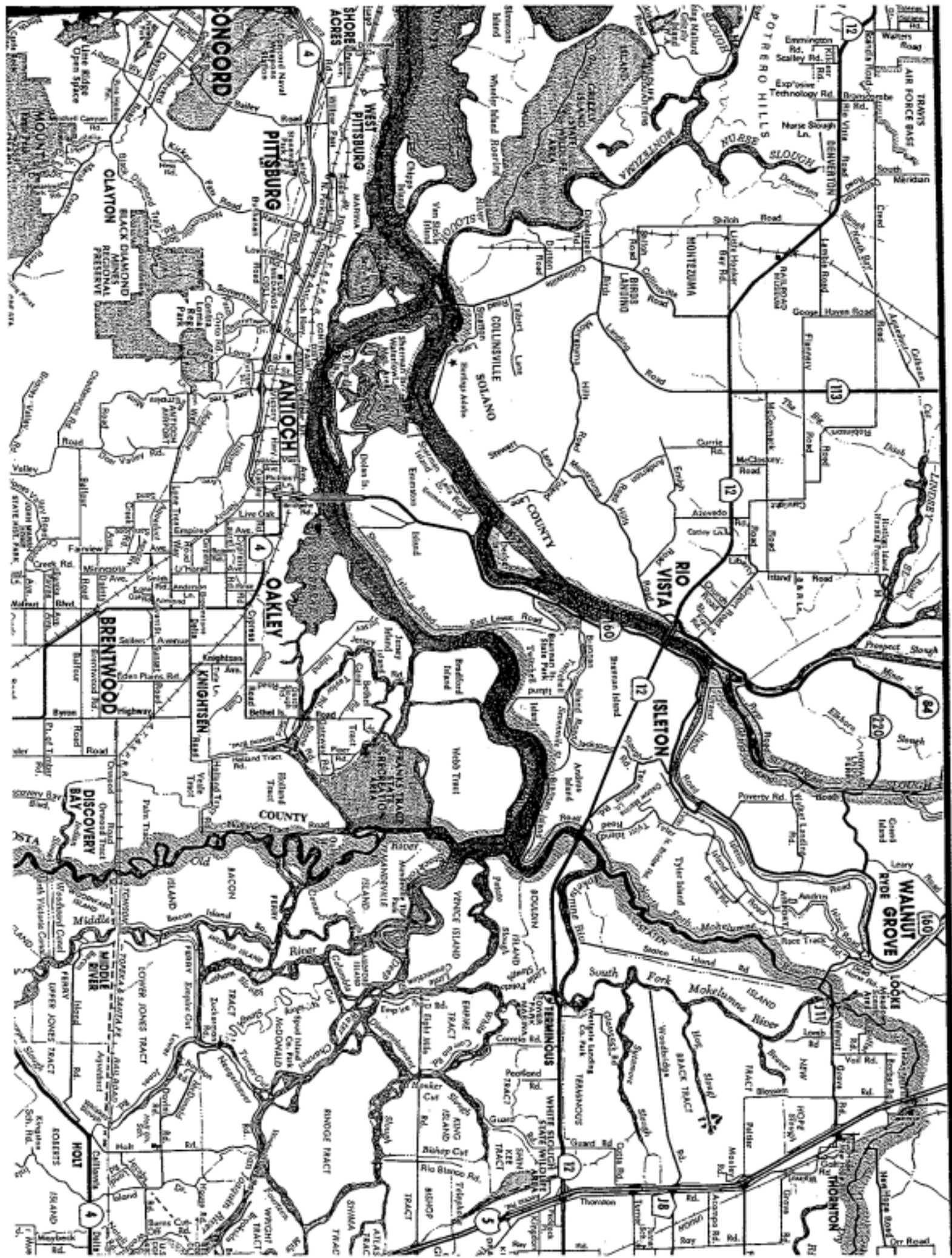
The fourth and ~~fifth~~ maps are a 7.5 min. maps of ~~Frank's~~ Tract

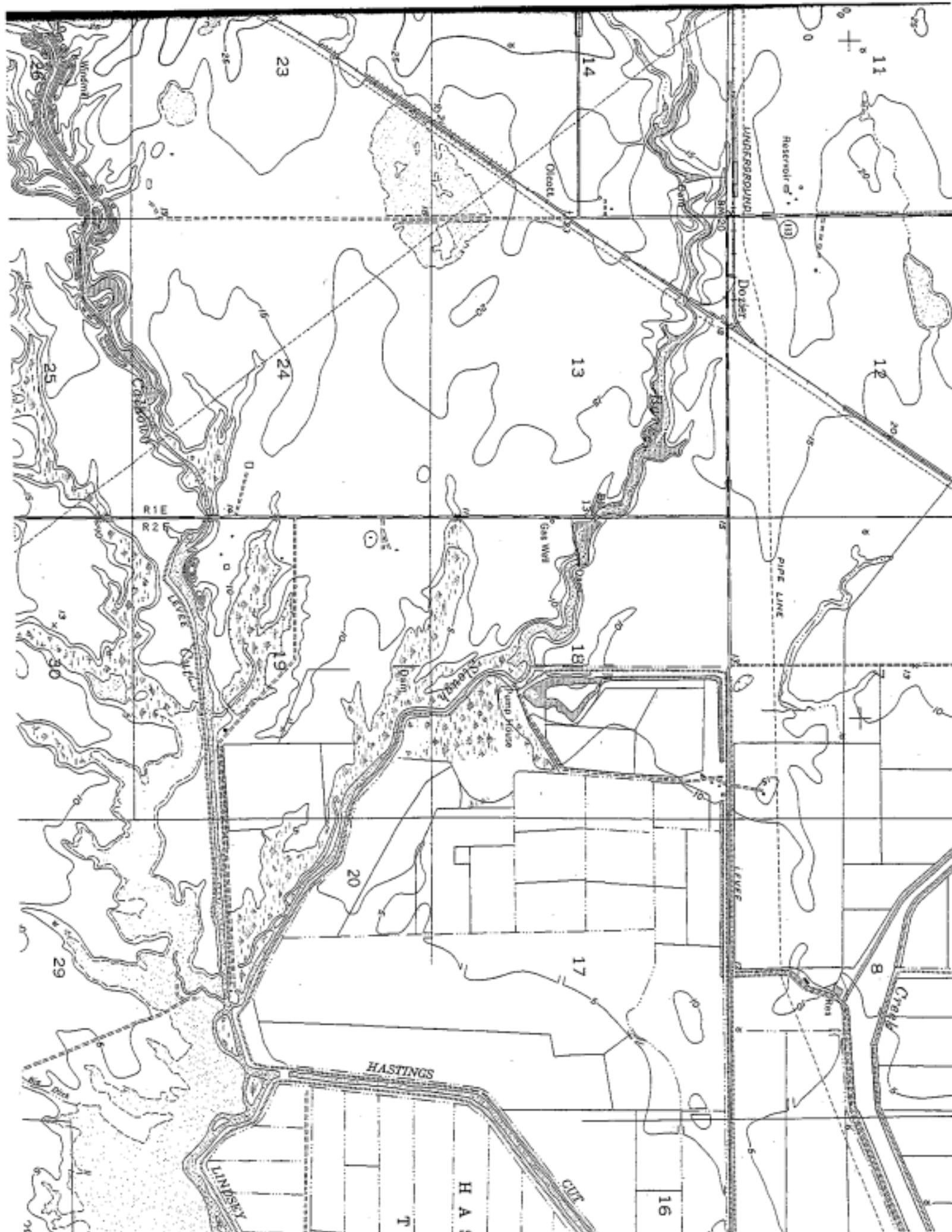
The ~~sixth~~ map is a 7.5 min. map of a set of Delta islands

The seventh map is a 7.5 min. map of second set of Delta islands

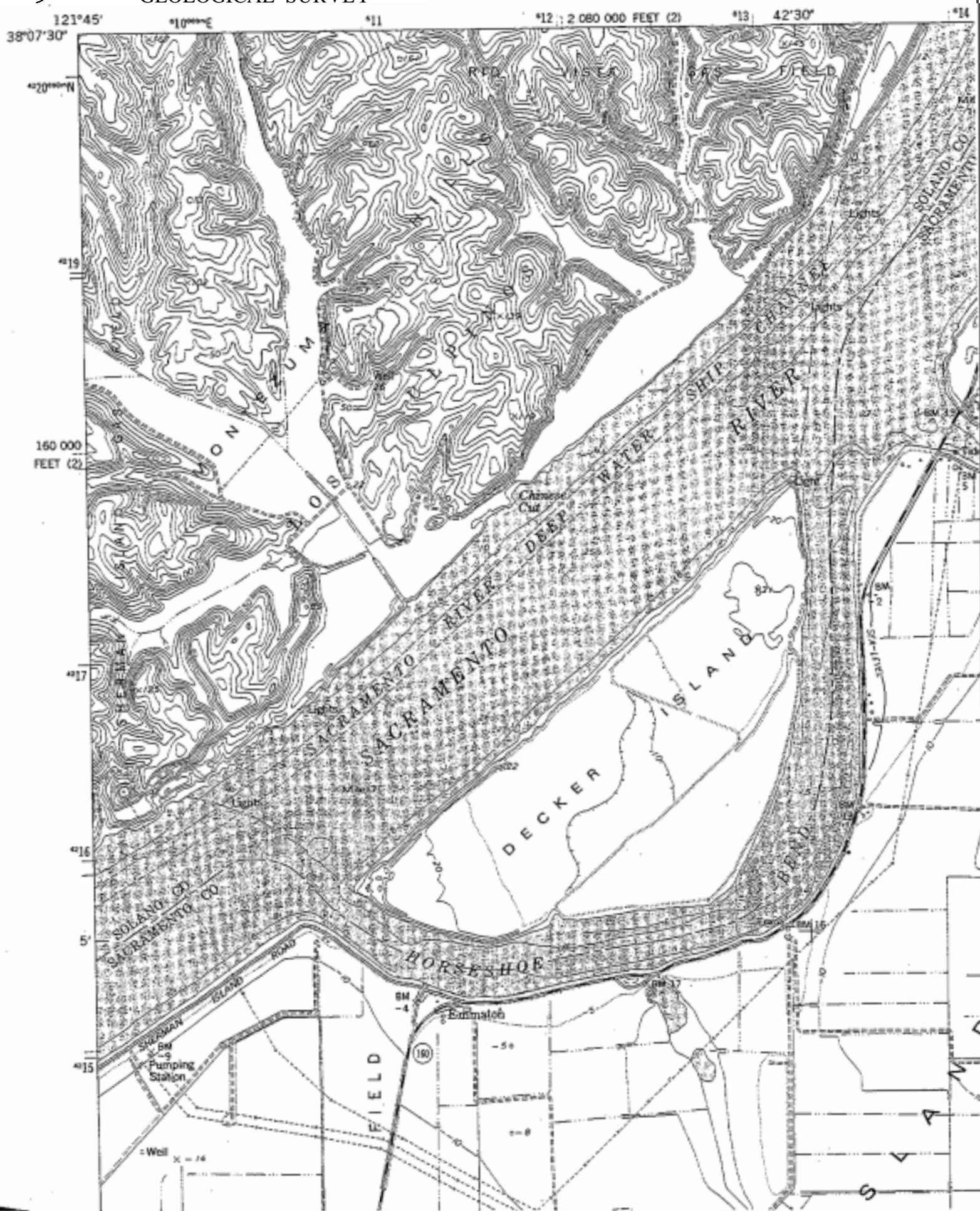
These maps are general working maps since we have not officially determined the locations for this research project. We will submit maps showing specific research locations with the permission letters prior *to* 30 days of notification of award.



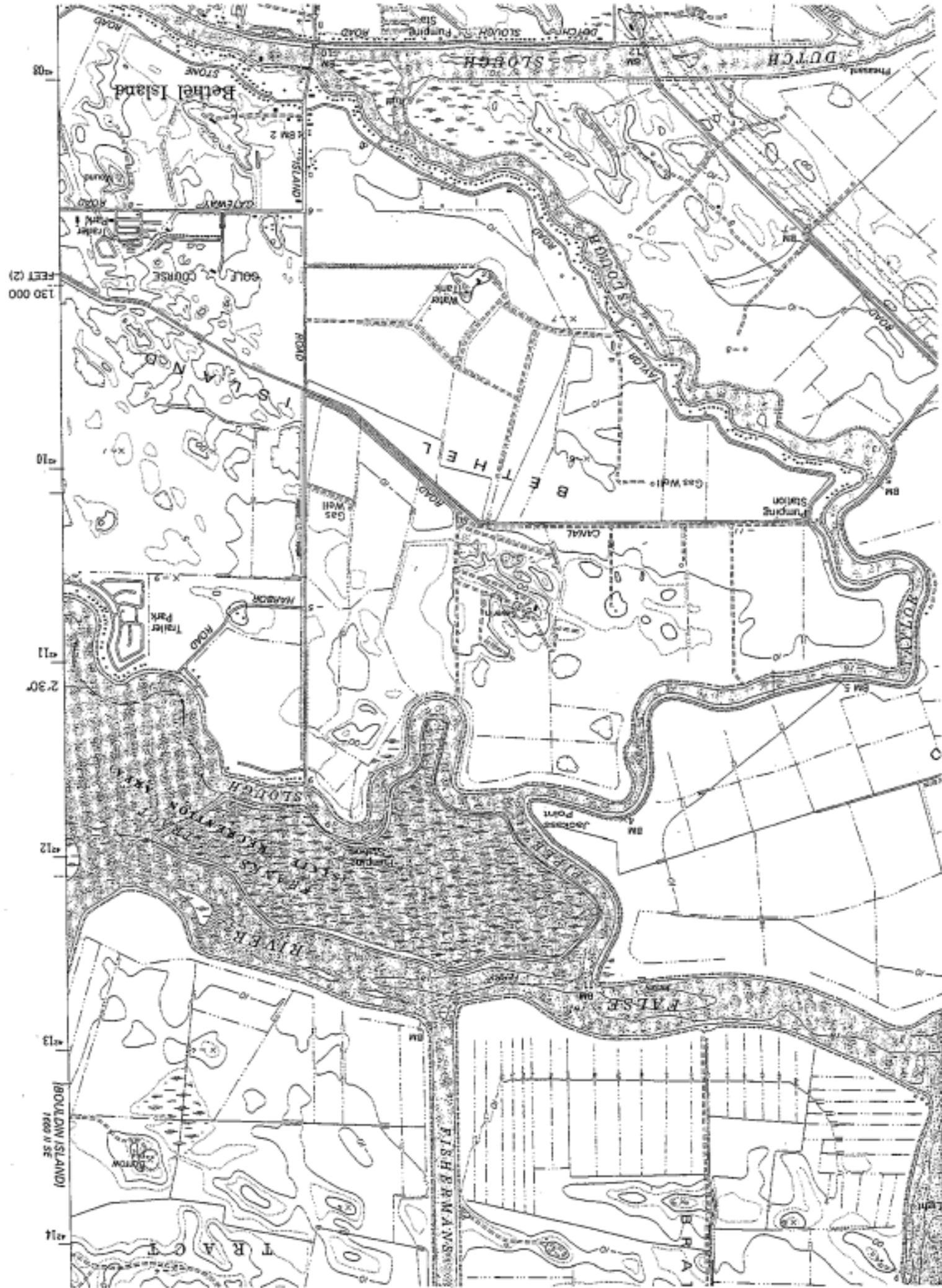


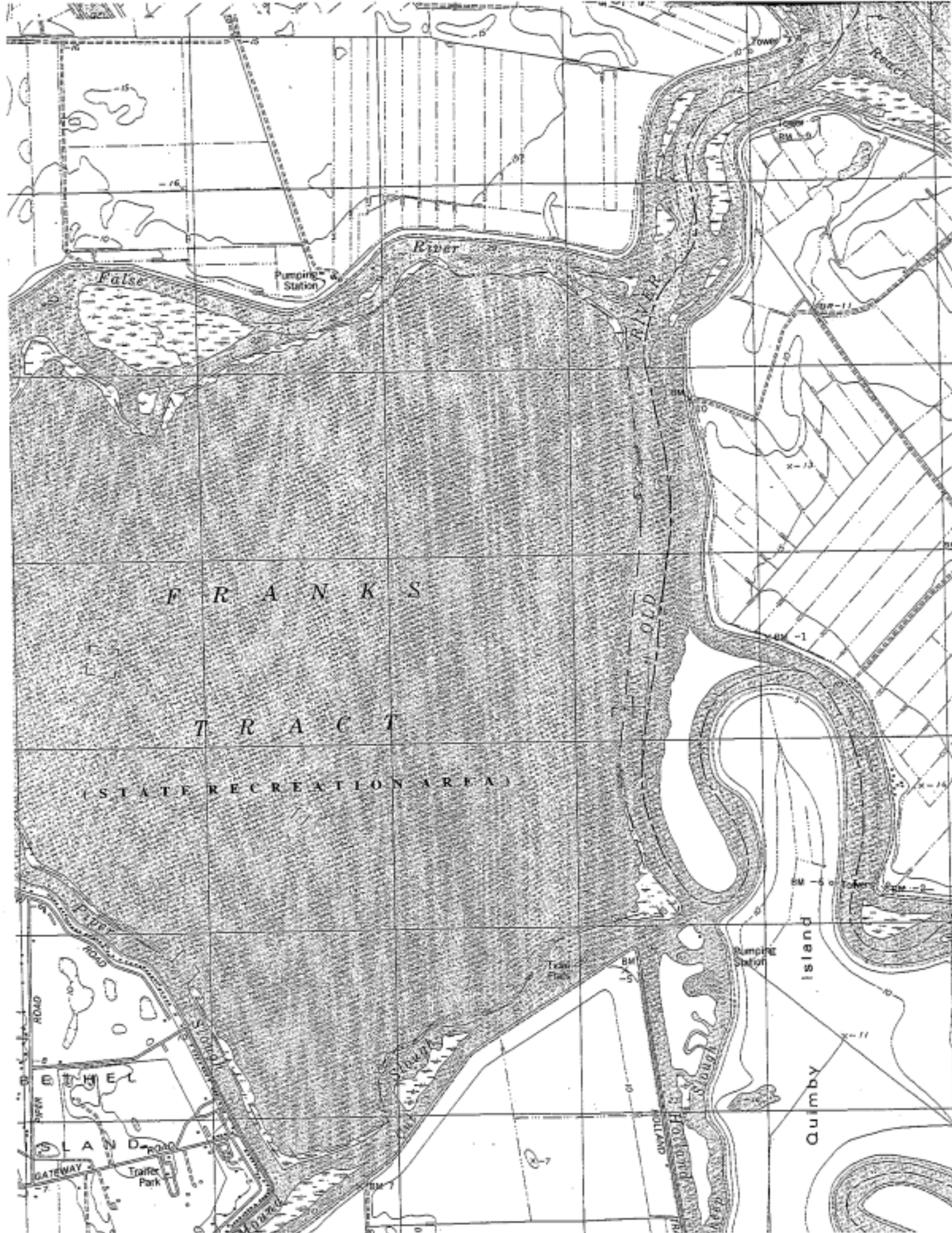


SECRET









FRANK'S

TRACT

(STATE RECREATION AREA)

River

False

Pumping  
Station

Pumping  
Station

Pumping  
Station

Island

Quimby

SLAND

GATEWAY

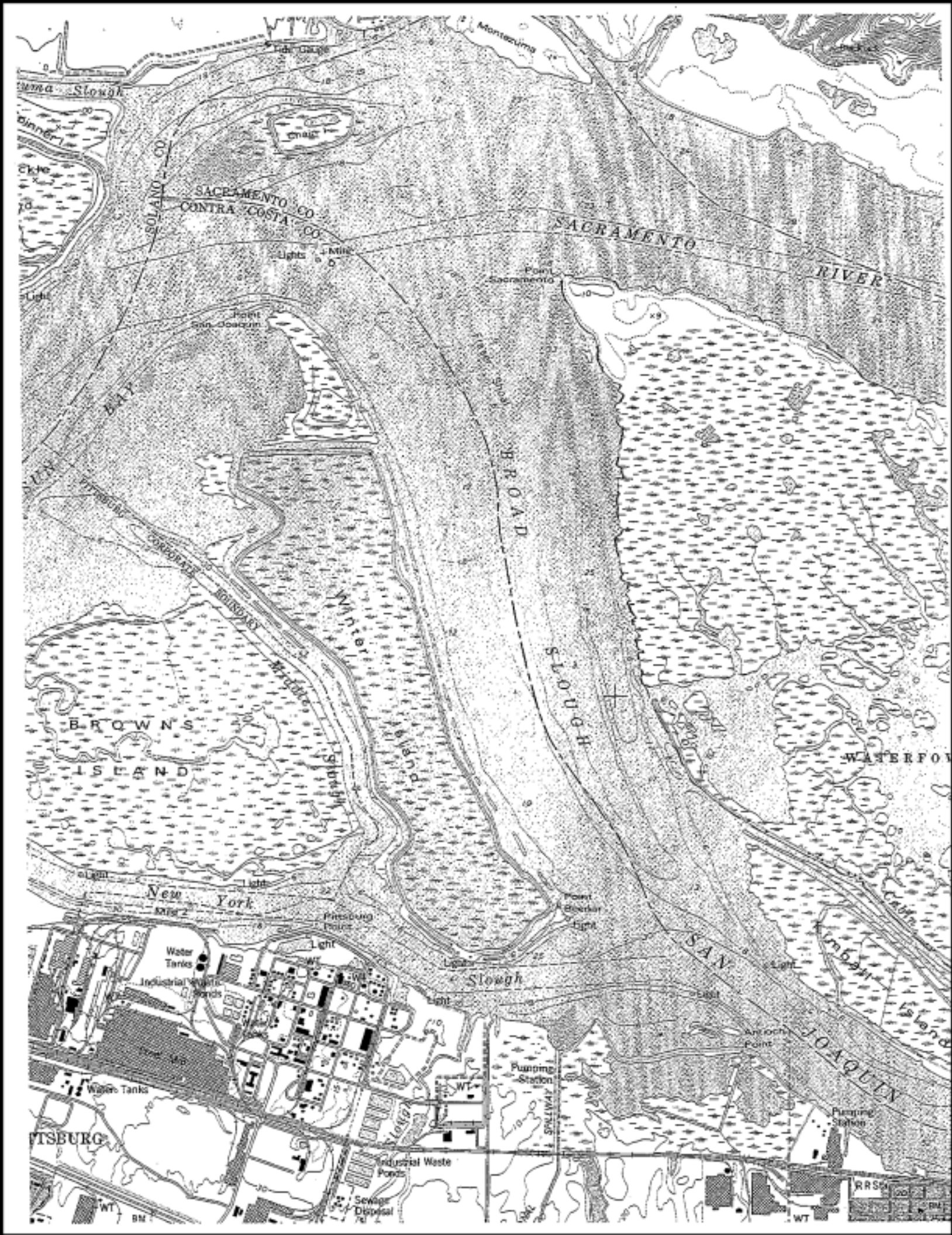
Transfer  
Park

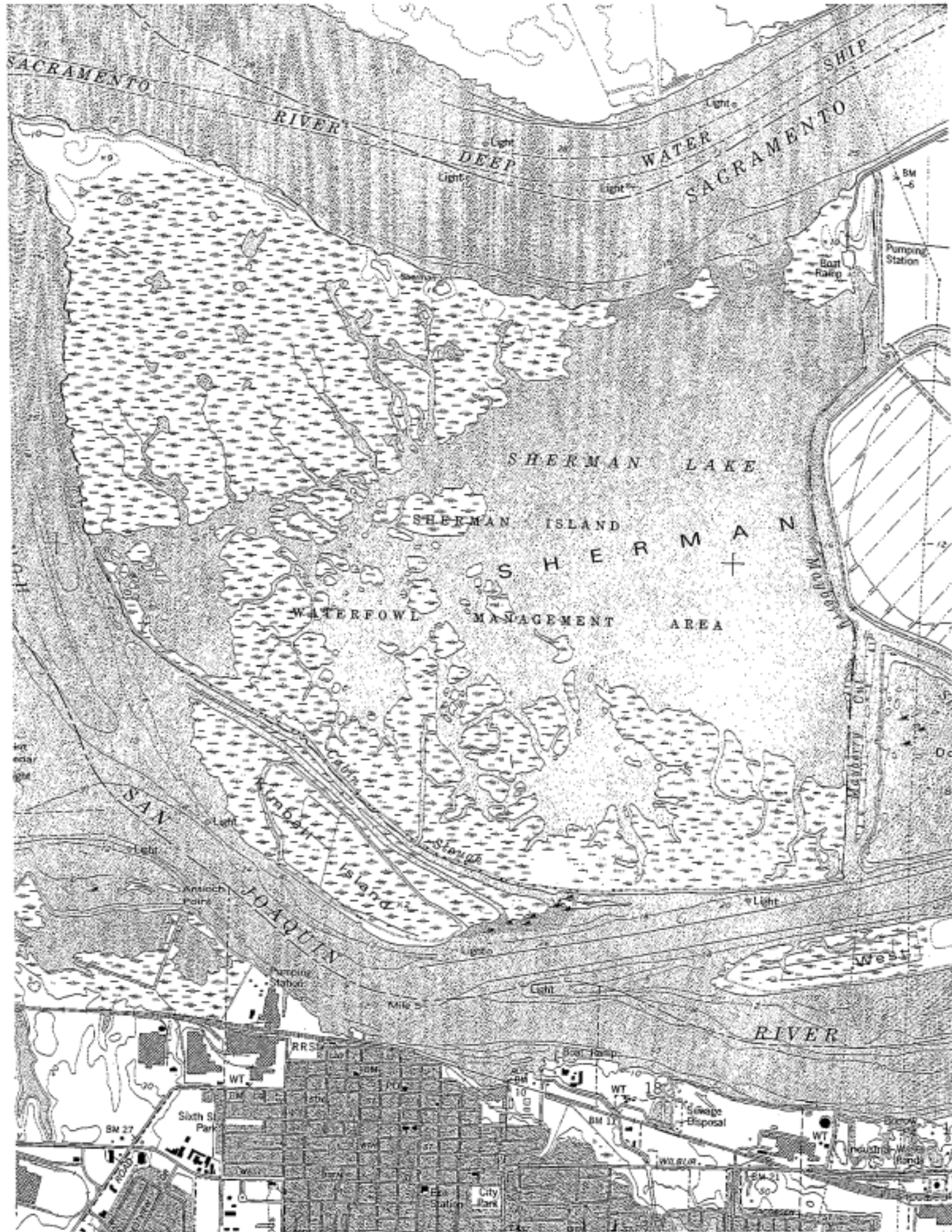
Teas  
Ponds

OLD

ROAD







## **Notification Letters to Local Governments**





## Bitterroot Restoration, Inc.

*Providing comprehensive restoration services since 1986*

[www.revegetation.com](http://www.revegetation.com)

May 11, 2000

Delta Protection Commission  
P.O. Box 530  
Walnut Grove, CA 95690

Subject: CalFed Delta Bay Proposal

Dear: Delta Protection Commission

This letter is notification that we may be conducting part of a research project within your jurisdiction. The research project entails the study of five special status plant species, their habitat and the development of methods to propagate and establish them.

We are currently working with California Department of Fish and Game to determine the best locations for this project. Once these locations are determined we will submit an application to conduct tasks associated with this project at each chosen location.

The establishment plots cover a total of 1.1 acres and will be planted at either Decker or Rhode islands.

Attached is a copy of our proposal including general maps of the areas of concern. We request that you review the methods section and the maps to gain an understanding of the project.

If you have questions or concerns about this research project, feel free to call (916) 434-9695. Thank you.

Sincerely,

John DiGregoria  
Restoration Ecologist



## Bitterroot Restoration, Inc.

*Providing comprehensive restoration services since 1986*

[www.revegetation.com](http://www.revegetation.com)

May 11, 2000

Bay Conservation and Development Commission  
30 Van Ness Ave. Rm 2011  
San Francisco, CA 94102

Subject: CalFed Delta Bay Proposal

Dear: Bay Conservation and Development Commission

This letter is notification that we may be conducting part of a research project within your jurisdiction. The research project entails the study of five special status plant species, their habitat and the development of methods to propagate and establish them.

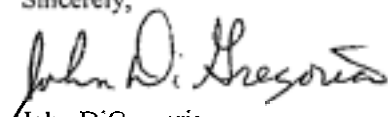
We are currently working with California Department of Fish and Game to determine the best locations for this project. Once these locations are determined we will submit an application to conduct tasks associated with this project at each chosen location.

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Attached is a copy of our proposal including general maps of the areas of concern. We request that you review the methods section and the maps to gain an understanding of the project.

If you have questions or concerns about this research project, feel free to call (916) 434-9695. Thank you.

Sincerely,

  
John DiGregoria  
Restoration Ecologist



## Bitterroot Restoration, Inc.

*Providing comprehensive restoration services since 1986*

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May 11, 2000

Contra Costa County  
Community Development  
John Kopchik  
651 Pine St., 4th Flr. North Wing  
Martinez, CA 94553

Subject: CalFed Delta Bay Proposal

Dear: **John** Kopchik

This letter is notification that we may be conducting part of a research project within your jurisdiction. The research project entails the study of five special ~~status~~ plant species, their habitat and the development of methods to propagate and establish them.

We are currently working with California Department of Fish and Game to determine the best locations for this project. Once these locations are determined we will submit an application to conduct tasks associated with this project at each chosen location.

The establishment plots cover a total of 1.1 acres and will be planted at either Decker or Rhode islands.

Attached is a copy of our proposal including general maps of the areas of concern. We request that you review the methods section and the maps to gain an understanding of the project.

If you have questions or concerns about this research project, feel free to call (916) 434-9695. Thank you.

Sincerely,

/John DiGregoria  
Restoration Ecologist



## Bitterroot Restoration, Inc.

*Providing comprehensive restoration services since 1986*

[www.revegetation.com](http://www.revegetation.com)

May 11, 2000

Contra Costa County  
Clerk of the Board of Supervisors  
Ann Cervelli  
651 Pine St., 1st. Floor  
Martinez, CA 94553

Subject: CalFed Delta Bay Proposal

Dear: AM Cervelli

This letter is notification that we may be conducting part of a research project within your jurisdiction. The research project entails the study of five special status plant species, their habitat and the development of methods to propagate and establish them.

We are currently working with California Department of Fish and Game to determine the best locations for this project. Once these locations are determined we will submit an application to conduct tasks associated with this project at each chosen location.

The establishment plots cover a total of 1.1 acres and will be planted at either Decker or Rhode islands.

Attached is a copy of our proposal including general maps of the areas of concern. We request that you review the methods section and the maps to gain an understanding of the project.

If you have questions or concerns about this research project, feel free to call (916) 434-9695. Thank you.

Sincerely,

John DiGregoria  
Restoration Ecologist



## Bitterroot Restoration, Inc.

*Providing comprehensive restoration services since 1986*

[www.revegetation.com](http://www.revegetation.com)

May 11, 2000

Sacramento County  
Planning Department  
Thomas W. Hutchings  
827 7th St. Room 230  
Sacramento, CA 95814

Subject: CalFed Delta Bay Proposal

Dear: Thomas W. Hutchings

This letter is notification that we may be conducting part of a research project within your jurisdiction. The research project entails the study of five special **status** plant species, their habitat and the development of methods to propagate and establish them.

We are currently working with California Department of Fish and Game to determine the best locations for this project. Once these locations are determined we will submit **an** application to conduct tasks associated with this project at each chosen location.

The establishment plots cover a total of 1.1 acres and will be planted at either Decker or ~~Rhode~~ islands.

Attached is a copy of **our** proposal including general maps of the areas of concern. We request that you review the methods section and the maps to gain an understanding of the project.

If you have questions or concerns about this research project, feel free to call (916) 434-9695. *Thank you.*

Sincerely,

John DiGregoria  
Restoration Ecologist



## Bitterroot Restoration, Inc.

*Providing comprehensive restoration services since 1986*

[www.revegetation.com](http://www.revegetation.com)

May 11, 2000

Sacramento County  
Clerk of the Board of Supervisors  
Cindy H. Turner  
700 H. St., Room 2450  
Sacramento, CA 95814

Subject: CalFed Delta Bay Proposal

Dear: Cindy H. Turner

This letter is notification that we may be conducting part of a research project within your jurisdiction. The research project entails the study of five special status plant species, their habitat and the development of methods to propagate and establish them.

We are currently working with California Department of Fish and Game to determine the best locations for this project. Once these locations are determined we will submit **an** application to conduct tasks associated with this project at each chosen location.

The establishment plots cover a total of 1.1 acres and will be planted at either Decker or Rhode islands

Attached is a copy of our proposal including general maps of the areas of concern. We request that you review the methods section and the maps to gain **an** understanding of the project.

If you have questions or concerns about this research project, feel free to call (916) 434-9695. Thank you.

Sincerely,

John DiGregoria  
Restoration Ecologist



## Bitterroot Restoration, Inc.

*Providing comprehensive restoration services since 1986*

[www.revegetation.com](http://www.revegetation.com)

May 11, 2000

San Joaquin County  
Clerk of the Board of Supervisors  
Lois M. Sahyoun  
222 East Weber Ave., Room 701  
Stockton, CA 95202

Subject: CalFed Delta Bay Proposal

Dear: Lois M. Sahyoun

This letter is notification that we may be conducting part of a research project within your jurisdiction. The research project entails the study of five special status plant species, their habitat and the development of methods to propagate and establish them.

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May 11, 2000

San Joaquin County  
Planning Department  
Community Services  
1810 East Hazelton Ave.  
Stockton, CA 95205

Subject: CalFed Delta Bay Proposal

Dear: Community Services

This letter is notification that we may be conducting part of a research project within your jurisdiction. The research project entails the study of five special status plant species, their habitat and the development of methods to propagate and establish them.

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May 11, 2000

Solano county  
Clerk of the Board of Supervisors  
Maggie Jeminez  
580 Texas St.  
Fairfield, CA 94533

Subject: CalFed Delta Bay Proposal

Dear: Maggie Jeminez

This letter is notification that we may be conducting part of a research project within your jurisdiction. The research project entails the study of five special status plant species, their habitat and the development of methods to propagate and establish them.

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May 11, 2000

Solano County  
Environmental Management  
Christopher Monske  
601 Texas St.  
Fairfield, CA 94533

Subject: CalFeu Delta Bay Proposal

Dear: Christopher Monske

This letter is notification that we may be conducting part of a research project within your jurisdiction. The research project entails the study of five special status plant species, their habitat and the development of methods to propagate and establish them.

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Restoration Ecologist



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May 11, 2000

Yolo County  
Clerk of the Board of Supervisors  
Patty Crittenden  
625 Court St., Room 204  
Woodland, CA 95695

Subject: CalFed Delta Bay Proposal

Dear: **Patty** Crittenden

This letter is notification that we may be conducting part of a research project within your jurisdiction. The research project entails the study of five special status plant species, their habitat and the development of methods to propagate and establish them.

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John DiGregoria  
Restoration Ecologist



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May 11, 2000

Yolo County  
Planning Commission  
David Morrison  
292 West Beamer St.  
Woodland, CA 95695

Subject: CalFed Delta Bay Proposal

Dear: David Morrison

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